

Work Order ID 84935

May-29-12 3:00:43 PM

84935

Page 1

Item ID: D209-669-043

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Replacement Skidtube

Stop

NS2

Start Date: 29/05/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 16/07/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/05/29 Tooling:

Date:

Run Start *NR1*

QC: _____

Date: _____ SPC (Y/N):

Date:

Stop

NR2

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| Draw Nbr | Revision Nbr | | | | | | | | |
| D2906 | Rev B | | | | | | | | |
| 100 | | 0.00 | | | | | | | |

100

DC

Document Control

DOCUMENT CONTROL

Memo

Photocopy D209-669 bluefile & type labels per PPP D205669-043 Chg 002

003 per QCD 12-5-18

110

110

Skidtubes

Skidtubes

Skidtubes

Memo

- Inspect mat'l D2500-1-190 for damage

- Drill pilot holes using drill jig DT8149, DT8711-2 & DT8711-3 (Do not use cutting fluid)

- Open holes to 0.500" as per Dwg D2906 without cutting fluid

- Deburr and blow out all chips from

- Acid etch and Alodine tube per QSI 005 4.1

> CF 12-6-18

SAD 12-06-18

ZG 12-6-18

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---------|------|---|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| 12/7/15 | 140 | Fwd bend is overbent. height = 2.20" | GP 12/7/15 | Acceptable | | | GP 12/7/15 | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Work Order ID 84935

May-29-12 3:00:43 PM

84935

Page 2

Item ID: D209-669-043

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Replacement Skidtube

Stop

NS2

Start Date: 29/05/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 16/07/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC3- Inspect Part Finish

0.00

120

QC

Memo

0.00

Quality Control

(1)

SAD 12-06-18

130

Skidtubes

0.00

130

Skidtubes

Memo

0.00

Skidtubes

-Bond web in place per QSI 015. Allow 12 Hrs. cure time before cutting

Pick:

Qty Part Number Description Batch

A/R Sikaflex-291

11/21/12

Sikaflex expire date:

Start Time: 15:45

12-01-12

Date: 12-6-18

Fin Time: _____

Date: _____

pick:

Qty

P/N

description

B/N

1 D2926-3

Web

84949

CFAD

12-06-18

| W/O: | | WORK ORDER CHANGES | | | | | | | |
|------|------|--------------------|--|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | | | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | | | |
| | | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|--|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector | |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

NOTE: Date & initial all entries

Work Order ID 84935

May-29-12 3:00:43 PM

84935

Page 3

Item ID: D209-669-043

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Replacement Skidtube

Stop

NS2

Start Date: 29/05/2012 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 16/07/2012 Req'd Qty: 1.00 *1*

Customer:

Reference:

| | | | | | | | |
|------------|---------------|-------|------------|-------|-----|-------|-------|
| Approvals: | Process Plan: | Date: | Tooling: | Date: | Run | Start | *NR1* |
| | QC: | Date: | SPC (Y/N): | Date: | | Stop | *NR2* |

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

140

140

CNC Bend 1

CNC Delta 100 Bender

BENDING MACHINE - CROSSTUBES

0.00

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150

150

Skidtubes

Skidtubes

0.00

Memo 0.00

Skidtubes

-Deburr ends and remove marks from bending

- Insert D4202-1 spacer, swage as per QSI002 and trim/ grind flush per QSI002 and dwg. Hold x-bolt with DT9701 Use tube expander 1/2 x17G to start expansion and finish with 1/2 x 18G to achieve dwg dimention.

160

160

QC

QC5- Inspect part completeness to step on W/O

0.00

Memo 0.00

Quality Control

CF/DR 12-6-19
PTC 12-1-9
12-12-12/07/06 / CF 12-1-9

W/O: 64935

WORK ORDER CHANGES

| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
|--------|------|-------------------------------------|----|--------|-----|-------------------------------------|--------------------------|
| 12-7-9 | 140 | QC6 needs to be added after Bending | W | 12-7-9 | | | |
| | | | | | | | |

Part No: D1091669-043

PAR #: _____

Fault Category: Bending (new) | skip tube

NCR: Yes No DQA:

Date: 14/07/17

Resolution: SCRAP

Disposition: SCRAP

QA: N/C Closed: _____

Date: _____

NCR: 12-1583

WORK ORDER NON-CONFORMANCE (NCR)

| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
|--------|------|--|-----------------------------|---------------------------------|-----------------|---------------------------|-----------------------|--------------------------|
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| 12-7-9 | 140 | Tube Not cut properly after bending. 13.4" (Ref) Measurement is 12.2" and 18.9 (Ref) measurement is 19.5" | W 12-7-10 | SCRAP 12-7-9 | G/DC 12-7-10 | SEP 12-07-10 | W 12-07-10 | 12-07-10 |
| | | RC: Employee error, tube was not positioned properly on saw table. Reason analysis PA: Add QC6 after bending | | employees were trained | | | | |

NOTE: Date & initial all entries

| W/O: | | WORK ORDER CHANGES | | | | | | | |
|------|------|--------------------|--|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | | | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | | | |
| | | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|--|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector | |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

NOTE: Date & initial all entries

Work Order ID 84935

May-29-12 3:00:43 PM

84935

Page 5

Item ID: D209-669-043

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Replacement Skidtube

Stop

NS2Start Date: 29/05/2012 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 16/07/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

| | | | | | | | |
|------------|---------------|-------|------------|-------|-----|-------|--------------|
| Approvals: | Process Plan: | Date: | Tooling: | Date: | Run | Start | *NR1* |
| | QC: | Date: | SPC (Y/N): | Date: | | Stop | *NR2* |

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---------------------------------------|--|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 200 *200* HandFinish | Pressure Wash per QSI005 4.3 Hand Finishing | 0.00 | | | | | | | |
| 210 *210* Powdercoat | Memo White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum | 0.00 | | | | | | | |
| 210 *210* Powder Coating | Memo START TIME: _____ OVEN TEMPERATURE: _____ FINISH TIME: _____ | 0.00 | | | | | | | |
| 220 *220* QC | QC3- Inspect Part Finish Quality Control | 0.00 | | | | | | | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Work Order ID 84935

May-29-12 3:00:43 PM

84935

Page 7

Item ID: D209-669-043

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Replacement Skidtube

Stop

NS2

Start Date: 29/05/2012 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 16/07/2012 Req'd Qty: 1.00 *1*

Customer:

Reference:

| | | | | | | | |
|------------|---------------|-------|------------|-------|-----|-------|-------|
| Approvals: | Process Plan: | Date: | Tooling: | Date: | Run | Start | *NR1* |
| | QC: | Date: | SPC (Y/N): | Date: | | Stop | *NR2* |

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|----------------------------------|--|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 240 *240* QC | QC5- Inspect part completeness to step on W/O | 0.00 | | | | | | | |
| Quality Control | Memo Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024 | 0.00 | | | | | | | |
| 250 *250* Packaging | Packaging | 0.00 | | | | | | | |
| Packaging | Memo Identify and pack for shipping as per PPPD209-669-043 Location: _____ PPP Rev: _____ | 0.00 | | | | | | | |
| 260 *260* QC | QC21- Final Inspection - Work Order Release | 0.00 | | | | | | | |
| Quality Control | Memo | 0.00 | | | | | | | |

1/20/11

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

May-29-12 3:00:48 PM

Page 1

Work Order ID: 84935

84935
D209-669-043

Parent Item: D209-669-043

Parent Item Name: Replacement Skidtube

Start Date: 29/05/2012

Required Date: 16/07/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: new IPP 08.02.13 LL, verified by: DD
IPP Rev:B remove DT # in seq140 DD 10.03.10 Verified by:EC

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|--|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-----------------|--------------|---------------|----------------|------------|
| D4202-1 | | Manufactured | No | | | | Each | 81.0000 | | 19 | | DL 12/07/06 | |
| *D4202-1* Spacer | | | | | | | | | ** | | (19) | | |
| | | | | <u>Location</u> | <u>B84763</u> | | <u>Loc Qty</u> | | <u>Loc Code</u> | | | | |
| | | | | LG | | | 5 | | | | | | |
| | | | | 77727 | | | 5 | | | | | | |
| | | | | LG002 | | | 76 | | | | | | |
| | | | | 78806 | | | 6 | | | | | | |
| | | | | 79810 | | | 70 | | | | | | |
| D2500-1-190 | | Manufactured | No | | | 110 | Each | 91.0000 | 1 | 1 | | | |
| *D2500-1-190* Ext'n - I Beam Tube 4" | | | | | | | | | ** | | | CF 12-6-18 | |
| | | | | <u>Location</u> | | | <u>Loc Qty</u> | | <u>Loc Code</u> | | | | |
| | | | | HALL | | | 91 | | | | | | |
| | | | | 74777 | | | 14 | | | | | | |
| | | | | 80061 | | | 77 | | | | 1 | | |
| D2926-3 | | Manufactured | No | | | 110 | Each | 0.0000 | 1 | | | | |
| *D2926-3* Web | | | | | | | | | ** | | | 1 | CF 12-6-18 |
| D2855 | | Manufactured | No | | | | | | | | 2 | | |
| *D2855* Cap | | | | <u>B84949</u> | | 230 | Each | 21.0000 | 2 | | | | |
| | | | | <u>Location</u> | | | <u>Loc Qty</u> | | <u>Loc Code</u> | | | | |
| | | | | FP002 | | | 21 | | | | | | |
| | | | | 65519 | | | 2 | | | | | | |
| | | | | 73347 | | | 16 | | | | | | |
| | | | | 75074 | | | 3 | | | | | | |

| W/O: | | WORK ORDER CHANGES | | | | | | | |
|------|------|--------------------|--|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | | | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | | | |
| | | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|--|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector | |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

May-29-12 3:00:48 PM

Page 2

Work Order ID: 84935

84935

Parent Item: D209-669-043

D209-669-043

Parent Item Name: Replacement Skidtube

Start Date: 29/05/2012

Required Date: 16/07/2012

Start Qty: 1.00

Required Qty: 1.00

AN3-5A

Purchased

No

230

Each

1,090.000

4

4

*********AN3-5A***

Bolt

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| ST350 | 1090 | |
| 115371 | 46 | |
| 117423 | 124 | |
| 118626 | 31 | |
| 119355 | 200 | |
| 120187 | 500 | |
| 121185 | 189 | |

AN960JD10L

NAS1149D0332J Purchased

No

230

Each

0.0000

4

4

*********AN960.JD10I***

Washer

ALS7-1032-130

Purchased

No

230

Each

2,136.000

44

44

*********AL S7-1032-130***

Insert

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| ST280 | 51 | |
| 117717 | 27 | |
| 118966 | 22 | |
| 119775 | 2 | |
| ST282 | 2085 | |
| 119530 | 73 | |
| 120181 | 12 | |
| 121444 | 2000 | |

| W/O: | | WORK ORDER CHANGES | | | | | | | |
|------|------|--------------------|--|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | | | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | | | |
| | | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

May-29-12 3:00:48 PM

Page 3

Work Order ID: 84935

84935
D209-669-043

Parent Item: D209-669-043

Parent Item Name: Replacement Skidtube

Start Date: 29/05/2012

Required Date: 16/07/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C4A

Purchased

No

230

Each

1,458.000

44

44

*********AN3C4A***

BOLT

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| ST350 | 1458 | |
| 120187 | 57 | |
| 120521 | 28 | |
| 120769 | 38 | |
| 121205 | 1000 | |
| 121556 | 335 | |

AN960C10L

NAS1149C0332

R

Purchased

No

230

Each

0.0000

44

44

*********AN960C10I***

washer

D2594-3

Manufactured

No

230

Each

2,418.000

14

14

*********D2594-3***

O-Ring, 205 Skidtube

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| FP001 | 2418 | |
| 65518 | 41 | |
| 79496 | 984 | |
| 79573 | 50 | |
| 79755 | 1343 | |

| W/O: | | WORK ORDER CHANGES | | | | | | | |
|------|------|--------------------|--|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | | | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | | | |
| | | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|--|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector | |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

May-29-12 3:00:48 PM

Page 4

Work Order ID: 84935

84935

Parent Item: D209-669-043

D209-669-043

Parent Item Name: Replacement Skidtube

Start Date: 29/05/2012

Required Date: 16/07/2012

Start Qty: 1.00

Required Qty: 1.00

D2594-1

Manufactured No

230

Each

311.0000

14

14

**

D2594-1

Plug, 205 Skidtube

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
|-----------------|----------------|-----------------|

| | | |
|-------|----|--|
| FP001 | 98 | |
|-------|----|--|

| | | |
|-------|----|--|
| 73401 | 30 | |
|-------|----|--|

| | | |
|-------|----|--|
| 74442 | 18 | |
|-------|----|--|

| | | |
|-------|----|--|
| 79495 | 50 | |
|-------|----|--|

| | | |
|------|-----|--|
| FP-A | 213 | |
|------|-----|--|

| | | |
|-------|---|--|
| 73401 | 0 | |
|-------|---|--|

| | | |
|-------|-----|--|
| 78590 | 213 | |
|-------|-----|--|

D3564-9

Manufactured No

230

Each

22.0000

1

1

**

D3564-9

Wearshoe

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
|-----------------|----------------|-----------------|

| | | |
|----|---|--|
| FG | 4 | |
|----|---|--|

| | | |
|-------|---|--|
| 76950 | 4 | |
|-------|---|--|

| | | |
|-------|----|--|
| FP001 | 18 | |
|-------|----|--|

| | | |
|-------|---|--|
| 67590 | 4 | |
|-------|---|--|

| | | |
|-------|---|--|
| 69943 | 1 | |
|-------|---|--|

| | | |
|-------|----|--|
| 82255 | 13 | |
|-------|----|--|

D3564-11

Manufactured No

230

Each

8.0000

1

1

**

D3564-11

Wearshoe

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
|-----------------|----------------|-----------------|

| | | |
|----|---|--|
| FG | 4 | |
|----|---|--|

| | | |
|-------|---|--|
| 77056 | 4 | |
|-------|---|--|

| | | |
|-------|---|--|
| FP001 | 4 | |
|-------|---|--|

| | | |
|-------|---|--|
| 80341 | 4 | |
|-------|---|--|

| W/O: | | WORK ORDER CHANGES | | | | | | | |
|------|------|--------------------|--|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | | | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | | | |
| | | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

May-29-12 3:00:48 PM

Page 5

Work Order ID: 84935

84935
D209-669-043

Parent Item: D209-669-043

Parent Item Name: Replacement Skidtube

Start Date: 29/05/2012

Required Date: 16/07/2012

Start Qty: 1.00

Required Qty: 1.00

D3564-5

Manufactured No

230

Each

13.0000

1 1

**

D3564-5

Wearshoe

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
|-----------------|----------------|-----------------|

| | | |
|-------|----|--|
| FG | 2 | |
| 34806 | 2 | |
| FP001 | 11 | |
| 77609 | 3 | |
| 82254 | 8 | |

D3566-1

Manufactured No

230

Each

31.0000

2 2

**

D3566-1

Gasket

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
|-----------------|----------------|-----------------|

| | | |
|-------|-----|--|
| FP | -22 | |
| 81619 | 10 | |
| FP002 | 53 | |
| 68924 | 2 | |
| 80919 | 3 | |
| 83898 | 16 | |

D3566-5

Manufactured No

230

Each

21.0000

1 1

**

D3566-5

Gasket

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
|-----------------|----------------|-----------------|

| | | |
|-------|----|--|
| FP | 12 | |
| 82275 | 12 | |
| FP002 | 9 | |
| 80374 | 3 | |
| 82274 | 6 | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

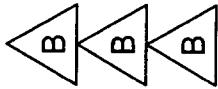
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

| QTY | QTY | Part Number | Description |
|------|------|---|-----------------------------|
| -041 | -043 | | |
| X | X | D2906-041 | SKIDTUBE ASSEMBLY |
| | | D2906-043 | SKIDTUBE ASSEMBLY |
| 1 | 1 | D2500-1-190 | EXTRUSION |
| 22 | 19 | D2579 | CROSS BOLT SPACER |
| 12 | 14 | D2594-1 | PLUG |
| 12 | 14 | D2594-3 | O-RING |
| 2 | 2 | D2855 | AFT CAP |
| 1 | 1 | D2926-1 | WEB |
| 1 | 1 | D2926-3 | WEB |
| 1 | 1 | D3564-9 | WEARSHOE (REPLACES D2577-1) |
| 1 | 1 | D3564-11 | WEARSHOE (REPLACES D2577-3) |
| 1 | 1 | D3564-5 | WEARSHOE (REPLACES D2577-5) |
| 1 | 1 | D3564-15 | WEARSHOE |
| 2 | 2 | D3566-1 | GASKET |
| 1 | 1 | D3566-5 | GASKET |
| 1 | 1 | D3566-15 | GASKET |
| 50 | 44 | ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or ALS4-1032-130 | INSERT |
| | | | |
| 50 | 44 | AN3C4A | BOLT |
| 4 | 4 | AN3-5A | BOLT |
| 50 | 44 | AN960C10L | WASHER |
| 4 | 4 | AN960JD10L | WASHER |

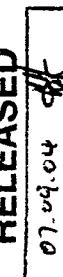


GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) LENGTH OF D2800-1 EXTRUSION BEFORE BENDING = 190 INCHES.
- 3) INSERT D2926-1/3 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 6) USE DART DRILL TEMPLATE DT2906-0411 (D2906-041) OR DT2906-043T1 (D2906-043) TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION C-C AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/291.
- 7) WELDING TO BE DONE PER DART QSI 004.
- 8) FINISH:
ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2926-1/3 WEB. POWDER COAT ASSEMBLY WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- 9) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (12 PLACES).
- 10) ALL DIMENSIONS ARE IN INCHES.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 84935 12/05

| REV. | DESCRIPTION | BY | DATE |
|----------|---|---|--|
| B | UPDATE DRAWING FORMAT; RE-ORGANIZE; ADD STAINLESS STEEL WEARPLATES AND GASKETS CHANGE WEARPLATE HARDWARE TO SS; | CB | 07.08.21 |
| | PG 1: ADD NOTE 10; PG 2 C7: REMOVE AFT Ø0.640 HOLE FROM -041; | | |
| | PG 3 C3: CORRECTED -043 CAP P/N; PG 3 D7: 38 PLACES WAS 44 PLACES; | DRAWING NO. D2906 | REV. B SHEET 1 OF 3 |
| A | NEW ISSUE | CP | 04.06.22 |
| RELEASED |  | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | SCALE NTS |
| 07.04.04 | | | |
| DATE | 07.08.21 | | COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS EXCLUDED ON THE GAPS/ES CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. |

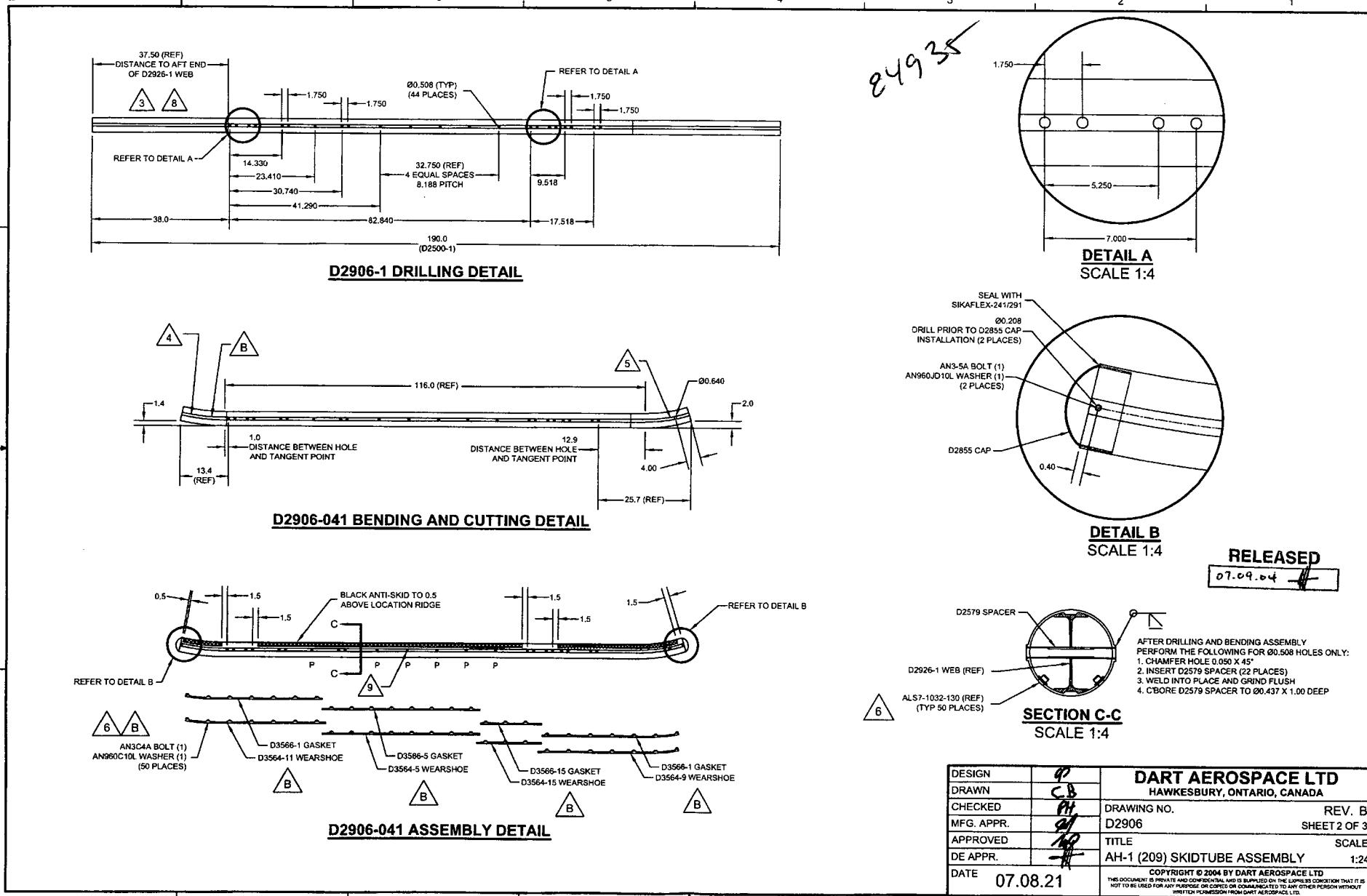
| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries



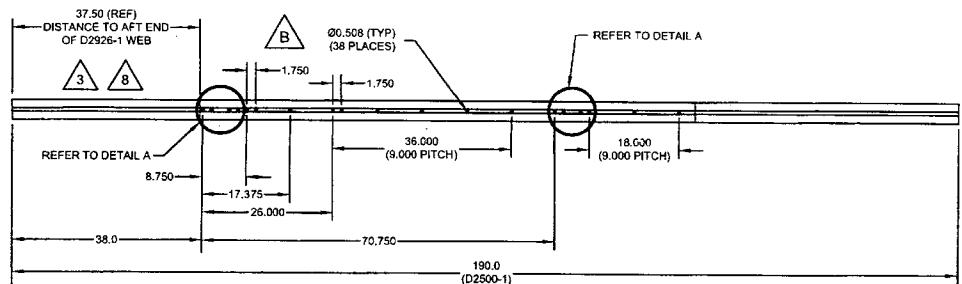
| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

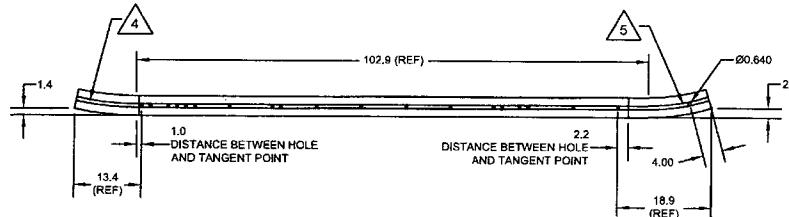
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

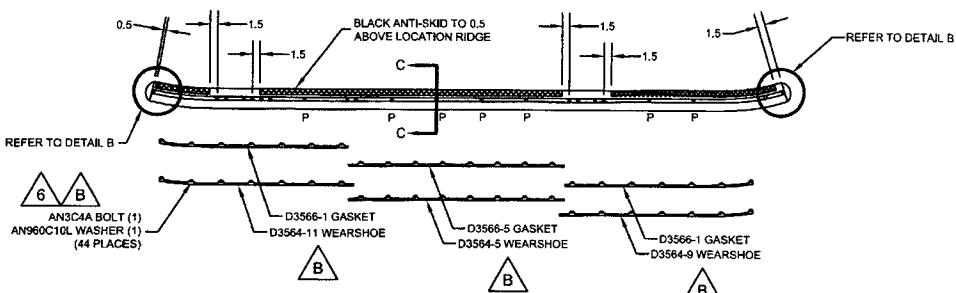
NOTE: Date & initial all entries



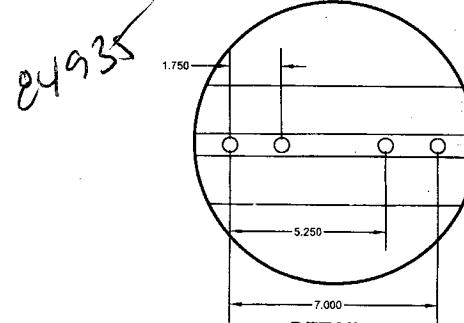
D2906-3 DRILLING DETAIL



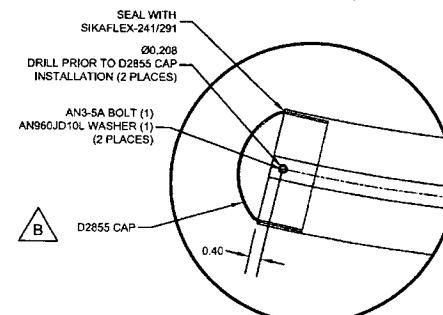
D2906-043 BENDING AND CUTTING DETAIL



D2906-043 ASSEMBLY DETAIL

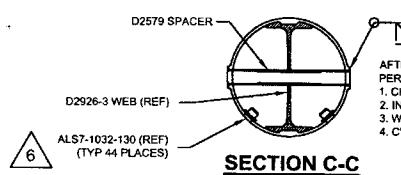


DETAIL A
SCALE 1:4



DETAIL B
SCALE 1:4

RELEASER
07.09.04 -



SECTION C-C
SCALE 1:4

| | | | | |
|------------|----------|------------------------------|--------------|--|
| DESIGN | 90 | DART AEROSPACE LTD | | |
| DRAWN | CB | HAWKESBURY, ONTARIO, CANADA | | |
| CHECKED | PH | DRAWING NO. | REV. B | |
| MFG. APPR. | 91 | D2906 | SHEET 3 OF 3 | |
| APPROVED | AD | TITLE | SCALE | |
| DE APPR. | | AH-1 (209) SKIDTUBE ASSEMBLY | | |
| DATE | 07.08.21 | 1:24 | | |

COPYRIGHT © 2004 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT COPIED, DISSEMINATED, OR USED FOR ANY OTHER PURPOSE.

TOTAL Length
128.05

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries